



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,593	08/01/2003	Richard P. Kolb	SSPI0015.001	1592
26629	7590	10/18/2005		
ZIOLKOWSKI PATENT SOLUTIONS GROUP, SC (ZPS) 14135 NORTH CEDARBURG ROAD MEQUON, WI 53097			EXAMINER ROJAS, BERNARD	
			ART UNIT	PAPER NUMBER
			2832	
DATE MAILED: 10/18/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/604,593

Applicant(s)

KOLB ET AL.

Examiner

Bernard Rojas

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17,22 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,11-17,22 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, filed 09/13/2005, with respect to the pending claims have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shlomi et al. [US 6,199,587].

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-8 11-17, 22 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Shlomi et al. [US 6,199,587].

Claim 1, Shlomi et al. discloses a solenoid [10] comprising:

a magnetically conductive shell [30, 87, 70] having a single coil [35] of wound wire;

a movable magnetic object [42] disposed within a bore of the single coil, the object configured to receive a magnetic force when current is induced in the single coil;

a permanent magnet [72] having a fixed polarity that magnetically repels the movable magnetic object when current is induced in the single coil and magnetically

Art Unit: 2832

attracts an end of the movable magnetic object when no current is induced in the single coil; and

a non-magnetic spacer [44] disposed between the permanent magnet and the movable magnetic object

Claim 2, Shlomi et al. discloses that the movable magnetic object is a plunger [figure 1].

Claims 4 and 13, Shlomi et al. discloses that a return spring [62] is operationally connect to bias the moveable magnetic object in a return position against the spacer when no current is induced in the single coil.

Claim 5, Shlomi et al. discloses an end plate [30] with an attracting stud [58] connected thereto.

Claim 6, Shlomi et al. discloses a housing having the coil, the plunger, the spacer and the bobbin disposed therein [figure 1].

Claim 7, Shlomi et al. discloses that the single coil is wrapped around a bobbin [32].

Claim 8, Shlomi et al. discloses a number of shunt components [34] connected to the bobbin.

Claims 11 and 22, Shlomi et al. discloses an electromagnetic switching apparatus comprising:

a bobbin [32] having a single coil [35] of wire wrapped there around;

a movable armature [42] disposed within the single coil; and

a permanent magnet [72] separated from the armature by a non-magnetic spacer [44] wherein the permanent magnet magnetically attracts the armature when the coil is de-energized and magnetically repels the armature when the coil is energized.

Claim 12, Shlomi et al. discloses that an end plate [30] and attracting stud [58] connected to one end of the bobbin wherein the attracting stud attracts the armature when the single coil is energized [figure 1].

Claim 14, Shlomi et al. discloses the apparatus of claim 13 wherein the armature is further configured to have a first polarity when the single coil is de-energized and a second polarity when the single coil is energized [detx paragraphs 18 and 19].

Claim 15, Shlomi et al. discloses the apparatus of claim 14 wherein the second polarity matches a plurality of the permanent magnet [detx paragraphs 18 and 19].

Claim 16, Shlomi et al. discloses that the second polarity is opposite to a polarity of the end plate [detx paragraphs 18 and 19].

Claim 17, Shlomi et al. discloses a plurality of shunt components [34, 54] disposed radially around the actuator between the single coil and the permanent magnet.

Claims 23 and 25-27, as previously discussed in claim 11, it would have been obvious for one of ordinary skill in the art at the time in invention was made to put the components in kit form in order to facilitate on-site assembly of the solenoids [figure 1].

Claim 24, as previously discussed in claim 12, it would have been obvious for one of ordinary skill in the art at the time in invention was made to put the components in kit form in order to facilitate on-site assembly of the solenoids.

Art Unit: 2832

***Allowable Subject Matter***

Claims 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Bernard Rojas*  
Br

*[Signature]*  
LINCOLN  
PRO  
GREGORY  
VAN  
NER  
2100